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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,279	12/21/2001	Robert Pierre	A34823-PCT-USA-A 070337.0	1215

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EXAMINER

ASINOVSKY, OLGA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/033,279

Applicant(s)

Pierre et al

Examiner

Olga Asinovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Dec 21, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Dec 21, 2001 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 6 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-6, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by

Coolbaugh et al U.S. Patent 5,457,161.

Claim 1 discloses a copolymer having n blocks used as a component of an elastomeric matrix of a sulphur cross-linkable rubber composition with reduced hysteresis, wherein each of said blocks comprises a diene elastomer having a molar content of units originating from conjugated dienes of greater than 15%, and one or each of said blocks which forms the chain end of said copolymer comprises a polyisoprene, wherein  $n=2$  or 3, wherein the number-average molecular weight  $Mn_1$  of said or each polyisoprene end block is between about 2,500 and 20,000 g/mol; the number-average molecular weight  $Mn_2$  of the block of said copolymer which is other than said or each polyisoprene end block is between about 80,000 g/mol and 350,000 g/mol.

There is only one independent claim 1.

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Coolbaugh discloses a triblock copolymer having a structure of (I)<sub>x</sub>-(B)<sub>y</sub>-(I)<sub>x</sub>, wherein the I block is polyisoprene of the formula (1) and the B block is polybutadiene having the formula (3), column 8, line 55-67 and column 9, lines 14-60. Each of the I blocks is polymerized such that the integer x can contain 100-200 monomer units. Each of the B block is polymerized such that the integer y can contain up to 5,000 monomer units. Therefore, each polyisoprene block can have molecular weight of 6,800-13,600 (68 × 100 or 68 × 200), and a polybutadiene block can have molecular weight of 270,000 (54 × 5,000). The molecular weight of the polyisoprene blocks and polybutadiene block are within the range specified in the present claim 1. The polybutadiene block is within the scope in the present claim 13. Each block comprises a diene elastomer wherein a molar content of units of the polymerizable isoprene and butadiene is greater than 15%, because each block can be derived from polyisoprene and polybutadiene, for the present claim 1. The block copolymer can be functionalized, column 28, lines 42-46, for the present claim 5. The block copolymer can be compounded with silica and vulcanizing agents, column 20, lines 65-67, for the present claims 5-6. The block copolymer can be used in a variety of applications, column 28, lines 51-57.

***Claim Rejections - 35 USC § 103***

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coolbaugh et al U.S. Patent 5,457,161 in view of Rauline U.S. Patent 5,227,425.

The primary reference to Coolbaugh does not disclose a functional group comprises a silanol group for the present claim 7, nor a trialkoxysilane for the present claim 8, and nor a tire tread.

Rauline discloses a sulfur-vulcanizable rubber composition for manufacturing a tire tread. The rubber composition comprising a reinforcing filler such as silica and a silica coupling agent such as a 3-chloropropyl-triethoxysilane, column 10, line 18. The functional agent such as a 3-chloropropyl-triethoxysilane is readable as a trialkoxysilane in the present claims 7-8. The rubber composition comprises a copolymer of a conjugated diene with an aromatic vinyl compound and at least one other diene elastomer, column 3, lines 22-30.

It would have been obvious to one of ordinary skill in the art to employ a functional agent such as a 3-chloropropyl-triethoxysilane as disclosed in Rauline's invention into elastomeric block copolymer Coolbaugh's invention for the purposes of being a functional agent.

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In Rauline's invention the elastomeric block copolymer comprising polyisoprene-polybutadiene block copolymer would be expected in light of other diene elastomer. It would have been obvious to one of ordinary skill in the art to use an elastomeric block copolymer in Coolbaugh for manufacturing a tire tread as suggested by Rauline, because the elastomeric block copolymer can be used as other diene elastomer for formulation a rubber composition for a tire tread.

***Claim Rejections - 35 USC § 112***

5. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 9,  $M_{n2}$  should be replaced with  $M_{n1}$

In claim 2, line 2,  $M_n/M_{n2}$  should be replaced with  $M_{n1}/M_{n2}$

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is (703) 308-0041. The examiner can normally be reached on Monday to Friday from 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718 and (703) 872-9311 after final.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

C.18

O.A.

Feb. 20, 2003



**James J. Seidleck**  
**Supervisory Patent Examiner**  
**Technology Center 1700**